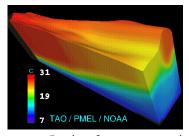
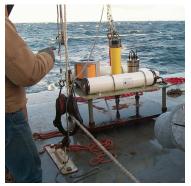




Moored buoy that measures ocean changes and transmits data in real time to forecast El Niños



Display of temperature and dynamic height from 70 buoy El Niño monitoring array



Tsunami detection instrumentation

1315 East West Hwy Silver Spring, MD 20910 301-713-1671 www.oar.noaa.gov

Pacific Marine Environmental Laboratory

A leader in developing ocean observational systems to address NOAA s mission

WhatWhat does thWhat does the Pacific Marine Envination?

The The Pacific The Pacific Marine Environmental Laboratory (PMEL) carries The Pacific scientific scientific investigations in oceanography and scientific investigation of the ocean environmental scientific

Recent Accomplishments:

- " ObservationsObservations of oceanic and atmospheric conditions and atmosphe areare essential are essential for the essential for the prediction of El Niño and thesethese data, PMEL completed the Pacific Tropical Atmosphere Ocean (TAO) Array, Array, the world s largest number of instrumented buoys comprising a oceanocean climate observing system. Payoffs: Data fPayoffs: Data from the P critical in the prediction of the 1997 El Niño six months in advance.
- " PMELPMEL pPMEL pioneered the development of a deep-ocean real-time tsunam seasea wave) monitoring network and the methodsea wave) monitoring network iininundationinundation maps to assist coastal communities in development emergencyemergency management planning. PMEL currenemergency management planning.
- " PMELPMEL studiesPMEL studies the impact of underwater volcanoes on the ocean s and and chemistry. This research has led to the and chemistry. This research has led underwater underwater volcanic eruption and the discoveryunderwater volcanic eruption are ejected from deep within the volcano. Payoffs: S lifelife forms havelife forms have been life forms have been incubated that have relevant to the biotechnology industry.

" PMEL,PMEL, along with the National Marine Fisheries Service (NMFS) sPMEL, along with the National Ma betweenbetween commerciallybetween commercially important fish species and their environment. Payoffs: The alongalong with monitoring along with monitoring the environment throughout along with monitoring the makers makers and improve forecasts of the amakers and improve forecasts of the amakers and improved over the past six years.

What s next for PMEL?

PMELPMEL conducts complexPMEL conducts complex ocPMEL conducts complex oceanographic experiment knowledgeknowledge of its scientific and engineering staff and their ability to obtain, knowledge of its scientific and en high-quality infrastructure of scientific instruments, computing infrastructure of scientific instruments, comp

Research Partnerships:

PMELPMEL has partnerPMEL has partnerships PMEL has partnerships with the Cooperative Institute for Arctic Cooperative Cooperative Institute Cooperative Institute for Marine Resources Studies (Oregon State University); the Joand Atmosphericand Atmospheric Research (University of Hawaii); and the Joint Institute for the Study of the Atmosphericand Ocean (University of Mashington) and the office of emergency services for Alaska, Coregon, Oregon, and Washington. Oregon, and Washington. Federal partners Oregon, and Washington. Federal partners Oregon, the Office of Naval Reoffices.

Budget and Staff:

PMPMELPMEL is a \$14.4 million laboratory (\$6.7 million in NOAA base), with a staff of 176, including 99 fPMEL is employees, 17 contract employees and 60 university employees.

For more information, contact:

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